

IN THE CLAIMS:

The status of each claim that has been introduced in the above-referenced application is identified in the ensuing listing of the claims. This listing of the claims replaces all previously submitted claims listings.

1-19. (Canceled)

20. (Currently amended) A method of transposon-mediated mutagenesis in a *C. elegans* genome, comprising:

- a. introducing a transgene construct into the *C. elegans* genome, wherein the construct comprises a transposase gene which is operably linked to a regulable expression control element and a 3' untranslated region of a gene that is expressed in the *C. elegans* germline, wherein the 3' untranslated region comprises a *glh-2* 3' untranslated region; and
- b. expressing the transposase gene, such that a transposon in the *C. elegans* genome transposes, causing a mutation in the *C. elegans* germline.

21-34. (Canceled)

35. (Currently amended) The method of Claim 20, wherein the ~~transposons comprise~~ transposon comprises a heterologous transposon.

36. (Currently amended) The method of Claim 35, wherein the heterologous ~~transposons are~~ transposon is introduced in the *C. elegans* genome.

37-126. (Canceled)

127. (Currently amended) The method of Claim 20, wherein the ~~transposons comprise~~ transposon comprises an endogenous transposon.

128. (Currently amended) The method of Claim 127, wherein the ~~transposons comprise~~ transposon comprises a Tc3 ~~transposens~~ transposon.

129. (Previously presented) The method of Claim 20, wherein the transposase gene is a TC3A transposase gene.

130. (Previously presented) The method of Claim 128, wherein the transposase gene is a TC3A transposase gene.

131. (Previously presented) The method of Claim 127, wherein the regulable expression control element is an inducible promoter.

132. (Previously presented) The method of Claim 131, wherein the promoter comprises a heat-shock promoter.

133. (Previously presented) The method of Claim 131, wherein the promoter comprises a tetracycline-regulated promoter.

134. (Previously presented) The method of Claim 20, wherein the construct is substantially free of bacterial plasmid DNA sequences.

135. (Previously presented) The method of Claim 20, wherein the construct is substantially free of repeated DNA sequences.

136. (Canceled)

137. (Currently amended) The method of Claim ~~136~~ 20, wherein the regulable expression control element comprises a heat-shock promoter.

138. (Currently amended) The method of Claim ~~136~~ 20, wherein the regulable expression control element comprises a *glh-2* promoter.

139. (Previously presented) The method of Claim 20, further comprising introduction of one or more additional copies of an endogenous transposon into the *C. elegans* germline.

140. (Previously presented) The method of Claim 139, wherein the endogenous transposon is a Tc3 transposon.

141. (Currently amended) The method of Claim 35, wherein the ~~transposons comprise~~ transposon comprises a *Mos 1* transposon.

142. (Previously presented) The method of Claim 35, wherein the transposase gene comprises restriction sites 5' of the start codon, restriction sites 5' of the stop codon, and an artificial intron in the transposase gene open reading frame.

143. (Previously presented) The method of Claim 35, wherein the regulable expression control element is an inducible promoter.

144. (Previously presented) The method of Claim 143, wherein the promoter comprises a heat-shock promoter.

145. (Previously presented) The method of Claim 143, wherein the promoter comprises a tetracycline-regulated promoter.

146. (Previously presented) The method of Claim 35, wherein the construct is substantially free of bacterial plasmid DNA sequences.

147. (Previously presented) The method of Claim 35, wherein the construct is substantially free of repeated DNA sequences.

148-149. (Canceled)

150. (Previously presented) The method of Claim 148 35, wherein the regulable expression control element comprises a *glh-2* promoter.